

TABLE OF HYPERBOLIC FUNCTIONS OF PROPAGATION CONSTANTS
NON-LOADED 24 GAUGE DSM CABLE AT 1000 CPS
(Propagation Constant, $\gamma = .2669 + j .2710$ Per Mile)

Miles (l)	$\text{Sinh } \gamma l$	$\text{Cosh } \gamma l$	$\text{Tanh } \gamma l$	$\text{Coth } \gamma l$
0	$0 + j 0$	$1 + j 0$	$0 + j 0$	$\infty - j \infty$
1	$.2602 + j .2773$ $.3803 / \underline{46.8^\circ}$	$.9980 + j .0723$ $1.0006 / \underline{4.1^\circ}$	$.2795 + j .2576$ $.3801 / \underline{42.7^\circ}$	$1.9347 - j 1.7832$ $2.6311 / \underline{42.7^\circ}$
2	$.4793 + j .5911$ $.7610 / \underline{51.0^\circ}$	$.9817 + j .2886$ $1.0232 / \underline{16.4^\circ}$	$.6123 + j .4221$ $.7437 / \underline{34.6^\circ}$	$1.1069 - j .7631$ $1.3445 / \underline{34.6^\circ}$
3	$.6111 + j .9719$ $1.1480 / \underline{57.9^\circ}$	$.9197 + j .6458$ $1.1237 / \underline{35.1^\circ}$	$.9420 + j .3953$ $1.0216 / \underline{22.8^\circ}$	$.9025 - j .3788$ $.9788 / \underline{22.8^\circ}$
4	$.5999 + j 1.4372$ $1.5574 / \underline{67.3^\circ}$	$.7607 + j 1.1333$ $1.3649 / \underline{56.1^\circ}$	$1.1192 + j .2219$ $1.1410 / \underline{11.2^\circ}$	$.8597 - j .1705$ $.8764 / \underline{11.2^\circ}$
5	$.3785 + j 1.9836$ $2.0194 / \underline{79.2^\circ}$	$.4348 + j 1.7264$ $1.7803 / \underline{75.9^\circ}$	$1.1325 + j .0660$ $1.1344 / \underline{3.3^\circ}$	$.8801 - j .0513$ $.8816 / \underline{3.3^\circ}$
6	$-.1313 + j 2.5768$ $2.5802 / \underline{92.9^\circ}$	$-.1424 + j 2.3755$ $2.3798 / \underline{93.4^\circ}$	$1.0842 - j .0098$ $1.0842 / \underline{0.5^\circ}$	$.9223 + j .0083$ $.9223 / \underline{0.5^\circ}$
7	$-1.0131 + j 3.1410$ $3.3003 / \underline{107.9^\circ}$	$-1.0626 + j 2.9947$ $3.1777 / \underline{109.5^\circ}$	$1.0382 - j .0299$ $1.0386 / \underline{1.6^\circ}$	$.9625 + j .0277$ $.9629 / \underline{1.6^\circ}$
8	$-2.3451 + j 3.5462$ $4.2515 / \underline{123.5^\circ}$	$-2.4115 + j 3.4485$ $4.2080 / \underline{125.0^\circ}$	$1.0100 - j .0262$ $1.0103 / \underline{1.5^\circ}$	$.9895 + j .0256$ $.9898 / \underline{1.5^\circ}$
9	$-4.1806 + j 3.5984$ $5.5159 / \underline{139.3^\circ}$	$-4.2497 + j 3.5399$ $5.5309 / \underline{140.2^\circ}$	$.9972 - j .0160$ $.9973 / \underline{0.9^\circ}$	$1.0026 + j .0160$ $1.0027 / \underline{0.9^\circ}$
10	$-6.5199 + j 3.0317$ $7.1903 / \underline{155.1^\circ}$	$-6.5828 + j 3.0028$ $7.2354 / \underline{155.5^\circ}$	$.9938 - j .0072$ $.9938 / \underline{0.4^\circ}$	$1.0063 + j .0073$ $1.0063 / \underline{0.4^\circ}$

Note: The data in this table are furnished for use with formulae such as those on Page 35 of Section AB92.075, "Introduction to Telephone Transmission Theory."